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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/773,897	
	Filing Date	02/01/2001	
	First Named Inventor	David H. Thibado	
	Art Unit	2832	
	Examiner Name	Tuyen T. Nguyen	
Total Number of Pages in This Submission	18	Attorney Docket Number	PHA 23,583B

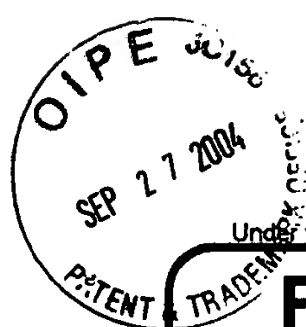
ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	James D. Leimbach, Reg. No. 34,374
Signature	
Date	September 21, 2004

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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 330.00

## Complete if Known

Application Number	09/773,897
Filing Date	02/01/2001
First Named Inventor	David H. Thibado
Examiner Name	Tuyen T. Nguyen
Art Unit	2832
Attorney Docket No.	PHA 23,583B

## METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit  
Account  
Number  
Deposit  
Account  
Name

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☐ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$)

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims  -20\*\* =  X  =   
Independent Claims  -3\*\* =  X  =   
Multiple Dependent  =

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$)

\*\*or number previously paid, if greater, For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 330.00

## SUBMITTED BY

Name (Print/Type)

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34,374

(Complete if applicable)

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Signature

Date

September 21, 2004

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of

David H. Thibado

AN AIR-WOUND COIL FOR  
VACUUM PICK-UP, SURFACE  
MOUNTING AND ADJUSTING

Serial No. 09/773,897

Filed: February 01, 2001

Group Art Unit: 2832

Examiner: Tuyen T. Nguyen

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Date: September 21, 2004

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Alexandria VA. 22313-1450

Sir:

**APPEAL BRIEF UNDER 37 C.F.R. 1.192**

09/27/2004 ZJUHR1 00000037 09773897

01 FC:1402

330.00 OP

## **Introduction**

This Application is before the Honorable Board of Patent Appeals and Interferences, from a final decision of the Examiner as indicated in the Advisory Action dated June 15, 2004.

## **Real party in interest**

The real party of interest is the Assignee who is U. S. Philips Corporation, a corporation existing under the laws of the State of Delaware (hereinafter Appellant).

## **Related appeals and interferences**

There are no related appeals or interferences to the present application that are known to appellant, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## **Status of the Claims**

Claims 1, 4-12 and 15-18 as filed are drawn to an air wound coil that provides for post placement tuning and that provides an air wound coil that can effectively be used with high speed, modern-day pick and place machines.

## **Status of the Amendments After Final**

A response was filed subsequent to the final rejection to overcome the Examiner's rejection of claims 1, 4, 6-12 and 16-18 under 35 U.S.C. §102(b). Claims 5 and 15 are objected to but are otherwise stated as being allowable. The Examiner in an advisory action indicated that the rejection based on 35 U.S.C. §102(b) stands.

## **Summary Description of the Invention**

The present invention relates to an electronic package having an air-wound coil that can be placed on a circuit board by vacuum pick-up devices. The package and air-wound coil in accordance with the invention can be tuned after placement. The air-wound coil is formed from a wire bent into a plurality of sequential loops (see page 4, lines 25-34). A surface of material is connected to the coil over a plurality of the sequential loops allowing the coil to be picked up by a vacuum head of a pick-and-place machine (see page 4, lines 27-29). The surface material includes adjusting means to allow for adjusting a position of the loops of the coil for turning the coil, after the coil is attached to a circuit board (see: page 4, lines 29-32; page 5, lines 1-22; and page 6, line 11 to page 7, line 5).

Multiple terminals of the coil provide electrical connection to pads on the circuit board using an electrically conductive material to connect the pads to the respective terminals. The circuit board employed by the invention has a dielectric substrate with numerous electrically conductive pads connected to the substrate providing electrical interconnection between components and the substrate. The circuit board is a wired circuit board providing electrical connections between the pads and additional circuits on the circuit board (see page 5, line 32- page 5, line 5).

The problems to be solved by the invention, as well the advantages of the invention, are described in detail in the description. Briefly stated, the invention as defined by the appealed claims has the advantage of providing a coil as an inductive device with a surface that allows simplified placement of the coil by modern, vacuum base and pick and place machines. Additionally, the same surface that allows the simplified placement of the coil allows for tuning of the coil placement.

## **Issues on Appeal**

The only issue presented is whether claims 1, 4, 6-12 and 16-18 are patentable under the provisions of 35 U.S.C. §102(b).

## **Grouping of the Claims**

The claims do not stand and fall together.

## **Arguments**

### **A. The rejection under 35 U.S.C. S 102(b)**

Claims 1, 4, 6-12 and 16-18 stand rejected under the provisions of under 35 U.S.C. §102(b) as being anticipated by DE 290694. The Examiner's position is that DE 290694 discloses all the elements of the appealed claims including the surface material connected to the air wound coils that is adapted to adjust the position of the air wound coils for tuning after attachment of the air wound coil to a circuit board.

### **B. The reference**

DE 290694 as described herein uses page numbering that begins with page 1 as being the cover page containing the bibliographic data and page 2 being the start of specification beginning with the title of the invention. DE 290694 discloses an electric spool component intended to be used for surface mount device assemblies (see Title and Field of the Invention on page 2, lines 1-7). The electric spool has a small plate mounted to the spool that allows easy handling of the electric spool without damaging it (see page 2, line 32 through page 3, line 3). The small plate allows easy handling and placement of the electric coil by low-pressure vacuum controlled pipettes (see page 5, line 23 to page 6, line 4). The small plate configuration can be used with different components, for example spools with different diameters, and provides for standardization in use with pipettes (see page 6, lines 6-12). The plate is preferably attached to the coil using glue (see page 7, line 36 to page 8, line 4). The plate is preferably made out of plastic (see page 10, lines 30-33). Note that DE 290694 does not mention or otherwise refer to, nor teach adjusting the electric coil assembly.

DE 290694 discloses an electric coil assembly with a small plate 4

attached (see page 10, line 30 to page 11, line 2). The small plate 4 is secured on the coil in using glue or other means. Portions of the glue are evident in Fig. 1 (b) as indicated by reference sign 5. The plate 4 is intended to allow a highly intricate machine to employ a suction pipette to place the electric coil assembly on a circuit board (see page 11, lines 19-26).

Fig. 2 of DE 290694 illustrates a further embodiment in the form of an electric, cylindrically wrapped spool 6 having a total spool length that is larger than the electric coil of the embodiment of Fig. 1. DE 290694 teaches that in spite of the increased length of spool 6 shown in Fig. 2 compared to the electric coil of Fig. 1, that a plate 4 having the identical dimensions can be used in either case, thus, providing standardized placement procedures that can be employed for differently sized electric components and different component types (see page 12, lines 15-29). DE 290694 teaches that different components can be used with an identical plate 4. The appellant respectfully points out that DE 290694 does not teach, or suggest, a package having an air wound coil with loops to the air wound coil that can be adjusted after the package is attached to a circuit board. Moreover, the package taught by DE 290694 does not teach or mention in any way, a surface material attached to the air wound coil adapted to adjust the position of the loops of the coil after the coil is attached to a circuit board.

Fig. 3 of DE 290694 illustrates the placement of the package shown in either Fig. 1 or Fig. 2 upon a circuit board. As taught by DE 290694 the packages shown in either Fig. 1 or Fig. 2 are placed by machine employing a suction pipette to place the coil package assembly, as previously described, on a circuit board. The description to Fig. 3 beginning on page 13, line 10 and proceeding through page 16 of DE 290694 describes the manner of mounting the packages on a circuit board as taught by DE 290694. Hollow areas 8 are found within circuit board 7 to hold the package with the coil. The hollow areas 8 are used as containers for the coil with a hollow ridge portion 9 formed adjacent to the hollow areas 8. The hollow ridge portions 9 are generally as deep as the plate 4 attached to the coil 1. The plate 4 rests within the hollow ridge portion 9 with the coil contained inside the hollow area 8. It should be noted that it is literally impossible to adjust the loops to a coil that is contained within a hollow area 8 once the package has been mounted onto the circuit board as described within DE 290694.

### **C. The differences between the invention and the references**

Prior art reference, DE 290694, discloses a coil assembly specifically tailored to be used with pipettes in modern, automated pick and place machines. The assembly disclosed by DE 290694 is directed to fastening a plate upon a coil in order to allow placement on a circuit board. DE 290694 teaches that the plate is preferably plastic so as not to interfere with the electrical characteristics of the coil. DE 290694 also teaches that the plate can be made of metal (see page 8, lines 6-13).

The appellant respectfully points out that the plate 4 taught by DE 290694 is not equivalent to the surface of material connected to the coils recited by the appealed claims. The plate 4 taught by DE 290694 does not have any function to allow the adjusting of the position of the loops of the coil for turning the coil, and moreover the plate 4 as taught by DE 290694 does not provide any function for turning the coil after the coil is attached to the circuit board. In fact, the disclosure of DE 290694, as previously discussed, teaches the placement of the coil portion inside a hollow area 8 within a circuit board 7 rendering it impossible to adjust the loops to the coil once the package is mounted on the circuit board 7. The disclosure of DE 290694 should only be viewed as teaching away from the subject matter defined by the present invention.

Thus, while DE 290694 discloses a coil assembly with a plate that can be used with modern automated pick and place machines, DE 290694 does not mention, disclose, teach or suggest any surface that allows the adjusting of the loops within the coil for turning the coil. Nor does DE 290694 teach that the plate 4 as taught therein can be fabricated from a surface that allows for turning of the coil after the coil is attached to the circuit board. As previously stated it is not possible to adjust the loops of the coil taught by DE 290694 after the coil is placed within hollow area 8 on circuit board 7.

The plate as taught by DE 290694 is designed to fit within predetermined areas within a circuit board (see page 14, lines 6-25). The appellant respectfully points out that DE 290694 does not teach any actions being performed on loops of the coil after the plate that is attached to the circuit board. DE 290694 does not teach, suggest or mention to any adjustment capability for the loops of the coil assembly.



"To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently." In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). As previously discussed, DE 290694 does not disclose or suggest the subject matter defined by appealed claim 1 for a surface material being attached to the coil that is adapted to adjust the position of the coil after attachment to a circuit board. Also as previously discussed, the package taught by DE 290694 inherently teaches away from the subject matter defined by appealed claim 1 due to the simple fact that it is not possible to adjust the loops of the coil in the package taught by DE 290694 after mounted on a circuit board.

Appealed claim 4 defines the subject matter of claim 1 in which the surface of material includes a portion which is removable from the air wound coil without damaging the air wound coil, so that the position of the plurality of sequential loops of the air wound coil can be changed to tune the air wound coil. DE 290694 makes no mention, teaching or suggestion for the surface includes a portion which is removable from the air wound coil without damaging the air wound coil, so that the position of the plurality of sequential loops of the air wound coil can be changed to tune the air wound coil.

Claim 5 is objected to by the Examiner as defining subject matter that is allowable over the disclosure of DE 290694. The appellant concurs the subject matter defined by claim is allowable over the disclosure of DE 290694. Claim 5 defines the subject matter of claim 1 in which the surface of material does not extend over all of the loops of the plurality of sequential loops of the air wound coil so that the position of the plurality of sequential loops, over which the material does not extend, can be changed by bending the air wound coil for tuning the air wound coil. DE 290694 makes no mention, teaching or suggestion for the surface material not extending over all of the loops of the plurality of sequential loops of the air wound coil so that the position of the plurality of sequential loops, over which the material does not extend, can be changed by bending the air wound coil for tuning the air wound coil.

Appealed claim 6 defines the subject matter of claim 1 in which the material is a flexible material, and in which the flexible material is adapted to bend the plurality of sequential loops to adjust the position of the plurality of sequential loops for

tuning the air wound coil without otherwise damaging the air wound coil. DE 290694 makes no mention, teaching or suggestion for the surface material being adapted to be a flexible material, in which the flexible material is adapted to bend the plurality of sequential loops to adjust the position of the plurality of sequential loops for tuning the air wound coil without otherwise damaging the air wound coil.

Appealed claim 7 defines the subject matter of claim 1 in which the material is adapted to be degraded by exposure to a solvent used to wash the circuit board after the air wound coil is connected to the circuit board and in which the plurality of sequential loops are bent to adjust the position of the plurality of sequential loops for tuning the air wound coil.

DE 290694 makes no mention, teaching or suggestion for the surface material being adapted to be degraded by exposure to a solvent used to wash the circuit board after the air wound coil is connected to the circuit board and in which the plurality of sequential loops are bent to adjust the position of the plurality of sequential loops for tuning the air wound coil.

Appealed claim 8 defines the subject matter of claim in which the material is adapted to be degraded by exposing the material to water and at least a portion of the surface of material can be removed by exposing the surface of material to water. DE 290694 makes no mention, teaching or suggestion for the surface material being adapted to be degraded by exposing the material to water and at least a portion of the surface of material can be removed by exposing the surface of material to water.

Appealed claim 9 defines the subject matter of claim 1 in which the surface of is adapted to be degraded by heating the circuit board, and in which the air wound coil is tuned after the material is degraded. DE 290694 makes no mention, teaching or suggestion for the surface material being adapted to be degraded by heating the circuit board, and in which the air wound coil is tuned after the material is degraded.

Appealed claim 10 defines the subject matter of claim 9 in which the surface of material is adapted to flow when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material flows. DE 290694 makes no mention, teaching or suggestion for the surface material being adapted to flow when

exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material flows.

Appealed claim 11 defines the subject matter of claim 9 in which the surface material is adapted to sublimate when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material sublimates. DE 290694 makes no mention, teaching or suggestion for the surface material is adapted to sublimate when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material sublimates.

Appealed claim 12 defines the subject matter of claim 6 in which the material is flexible and adapted to be cut between each loop in the plurality of sequential loops of the air wound coil so that the position of at least one loop in the plurality of sequential loops can be adjusted to tune the air wound coil. DE 290694 makes no mention for an air wound coil package has a surface area adapted to provide adjustment to the loops of the coil after mounting on a circuit board, wherein the material is flexible and adapted to be cut between each loop in the plurality of sequential loops of the air wound coil so that the position of at least one loop in the plurality of sequential loops can be adjusted to tune the air wound coil.

Claim 15 is objected to and stated by the Examiner as defined allowable subject matter. The appellant concurs that claim 15 defines subject that is allowable matter of over the disclosure of DE 290694. Claim 15 defines the subject matter of claim 1 wherein package further defines subject matter for the surface of material includes a portion which is a removable from the air wound coil without damaging the air wound coil, so that the position of the plurality of sequential loops of the air wound coil can be changed to tune the air wound coil, the surface of material does not extend over all loops of the plurality of sequential loops of the air wound coil so that the position of the plurality of sequential loops, over which the material does not extend, can be changed by bending the air wound coil for tuning the air wound coil, the material is a flexible material, and in which the flexible material is adapted to bend the plurality of sequential

loops to adjust the position of the plurality of sequential loops for tuning the air wound coil without otherwise damaging the air wound coil, the material is adapted to be degraded by exposure to a solvent, wherein the solvent used to wash the circuit board after the air wound coil is connected to the circuit board, and wherein the plurality of sequential loops are bent to adjust the position of the plurality of sequential loops for tuning the air wound coil, the material is adapted to be degraded by exposing the material to water and at least a portion of the surface of material can be removed by exposing the surface of material to water, the material is adapted to be degraded by heating the circuit board, and the air wound coil is tuned after the material is degraded, the surface of material is adapted to flow when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material flows, the surface material is adapted to sublime when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material sublimates, the material is adapted to cut between loops in the plurality of sequential loops of the air wound coil so that the position of at least one loop in the plurality of sequential loops can be adjusted to tune the coil, the material comprises a water soluble material, the plurality of terminals comprise strait sections of the wire extending tangentially to the plurality of sequential loops of the air wound coil at the end of the air wound coil, the wire is nearly pure copper, the wire is between .05 mm and 1 mm in diameter, a space between consecutive loops of the plurality of sequential loops is between 1.1 and 20 times the diameter of the wire and a diameter of each loop of the plurality of sequential loops is between 10 and 100 times the diameter of the wire.

DE 290694 makes no mention of the subject matter defined by claim 15.

Appealed claim 16 defines the subject matter of claim 1 in which a space between consecutive loops of the plurality of sequential loops is between 2 and 10 times a diameter of the wire. DE 290694 makes no mention for an air wound coil package has a surface area adapted to provide adjustment to the loops of the coil after mounting on a circuit board, in which a space between consecutive loops of the plurality of sequential loops is between 2 and 10 times a diameter of the wire.

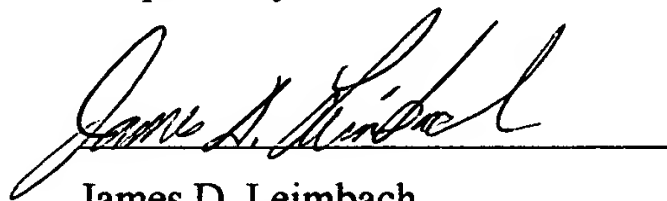
Appealed claim 17 defines the subject matter of claim 1 and wherein the air wound coil is adapted to be picked up using a vacuum probe of a head of a pick-and-place machine such that the vacuum probe is coupled to the surface of material. DE 290694 makes no mention for an air wound coil package has a surface area adapted to provide adjustment to the loops of the coil after mounting on a circuit board, wherein the air wound coil is adapted to be picked up using a vacuum probe of a head of a pick-and-place machine such that the vacuum probe is coupled to the surface of material.

Appealed claim 18 defines the subject matter of claim 1 and further defines the subject matter for the air wound coil not comprising a core. DE 290694 makes no mention for an air wound coil package has a surface area adapted to provide adjustment to the loops of the coil after mounting on a circuit board, wherein the coil does not have a core.

#### **D. Conclusion**

In summary, the Examiner's rejections of the claims are believed to be in error for the reasons explained above. The rejections of each of claims 1-4, 6-12 and 16-18 should be reversed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James D. Leimbach", is written over a horizontal line.

James D. Leimbach  
Attorney for Appellants  
Registration No. 34,374

Telephone: 585-381-9983  
Facsimile: 585-381-9983

## **APPENDIX . Claims on Appeal**

**1. An electronic package, comprising:**

**an air wound coil comprising a wire bent into a plurality of sequential loops, wherein an adjustable space extends between successive loops of the plurality of sequential loops;**

**a plurality of terminals for attaching the air wound coil to a circuit board:  
surface of material connected to the air wound coil, wherein the surface of material is adapted to adjust a position of the plurality of sequential loops of the air wound coil for tuning the air wound coil, after the air wound coil is attached to the circuit board.**

**4. The package of Claim 1 in which the surface of material includes a portion which is removable from the air wound coil without damaging the air wound coil, so that the position of the plurality of sequential loops of the air wound coil can be changed to tune the air wound coil.**

**5. The package of Claim 1 in which the surface of material does not extend over all of the loops of the plurality of sequential loops of the air wound coil so that the position of the plurality of sequential loops, over which the material does not extend, can be changed by bending the air wound coil for tuning the air wound coil.**

**6. The package of Claim 1 in which the material is a flexible material, and in which the flexible material is adapted to bend the plurality of sequential loops to adjust the position of the plurality of sequential loops for tuning the air wound coil without otherwise damaging the air wound coil.**

**7. The package of Claim 1 in which the material is adapted to be degraded by exposure to a solvent used to wash the circuit board after the air wound coil is connected to the circuit board and in which the plurality of sequential loops are bent to adjust the position of the plurality of sequential loops for tuning the air wound coil.**

8. The package of Claim 7 in which the material is adapted to be degraded by exposing the material to water and at least a portion of the surface of material can be removed by exposing the surface of material to water.
9. The package of Claim 1 in which the material is adapted to be degraded by heating the circuit board, and in which the air wound coil is tuned after the material is degraded.
10. The package of Claim 9 in which the surface of material is adapted to flow when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material flows.
11. The package of Claim 9 in which the surface material is adapted to sublime when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material sublimates.
12. The package of Claim 6 in which the material is adapted to be cut between each loop in the plurality of sequential loops of the air wound coil so that the position of at least one loop in the plurality of sequential loops can be adjusted to tune the air wound coil.
15. The package of Claim 1 in which:
  - the surface of material includes a portion which is a removable from the air wound coil without damaging the air wound coil, so that the position of the plurality of sequential loops of the air wound coil can be changed to tune the air wound coil;
  - the surface of material does not extend over all loops of the plurality of sequential loops of the air wound coil so that the position of the plurality of sequential loops, over which the material does not extend, can be changed by bending the air wound coil for tuning the air wound coil;

the material is a flexible material, and in which the flexible material is adapted to bend the plurality of sequential loops to adjust the position of the plurality of sequential loops for tuning the air wound coil without otherwise damaging the air wound coil;

the material is adapted to be degraded by exposure to a solvent, wherein the solvent used to wash the circuit board after the air wound coil is connected to the circuit board, and wherein the plurality of sequential loops are bent to adjust the position of the plurality of sequential loops for tuning the air wound coil;

the material is adapted to be degraded by exposing the material to water and at least a portion of the surface of material can be removed by exposing the surface of material to water;

the material is adapted to be degraded by heating the circuit board, and the air wound coil is tuned after the material is degraded;

the surface of material is adapted to flow when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material flows;

the surface material is adapted to sublime when exposed to a soldering temperature of eutectic Pb/Sn alloy and in which at least one loop in the plurality of sequential loops is bendable for tuning the air wound coil after the surface of material sublimates;

the material is adapted to cut between loops in the plurality of sequential loops of the air wound coil so that the position of at least one loop in the plurality of sequential loops can be adjusted to tune the coil;

the material comprises a water soluble material;

the plurality of terminals comprise strait sections of the wire extending tangentially to the plurality of sequential loops of the air wound coil at the end of the air wound coil;

the wire is nearly pure copper;

the wire is between .05 mm and 1 mm in diameter;



• a space between consecutive loops of the plurality of sequential loops is between 1.1 and 20 times the diameter of the wire; and  
• a diameter of each loop of the plurality of sequential loops is between 10 and 100 times the diameter of the wire.

16. The package of Claim 1 in which a space between consecutive loops of the plurality of sequential loops is between 2 and 10 times a diameter of the wire.

17. The package of Claim 1, wherein the air wound coil is adapted to be picked up using a vacuum probe of a head of a pick-and-place machine such that the vacuum probe is coupled to the surface of material.

18. The package of Claim 1, wherein the air wound coil does not comprise a core.